



CLAIM OF PRIORITY

Applicant claims priority based on provisional ~~patnet~~ patent application Serial Number 60/154,948 filed September 21, 1999, and on provisional ~~patnet~~ patent application Serial Number 60/157,547 filed October 4, 1999.



TECHNICAL FIELD

The present invention relates generally to systems for automatically coating the human body or selected parts thereof with predetermined fluids. More particularly, the invention relates to an automated self-tanning (a/k/a sunless tanning) system, and to an improved self tanning self-tanning composition.



There are specific and significant problems with the manual coating of each of these products.

The artificial tanning application provides a good illustration of the types of problems normally encountered when manually coating with these products. Artificial tanning is also one of the most demanding applications in that uniformity of the coating is critical to assure uniform tanning.



The fan 18 should have a flow of 100 to 5000 cubic feet per minute per square foot of opening, preferably 50 to 1000 cubic feet per minute per square foot, and most preferably 100 to 400 cubic feet per minute per square foot. At flow rates of below 100 cubic feet per minute per square foot, the air movement is sufficient to guide the atomized spray through the containment area. At flow rates of 100 to 400 cubic feet per minute per square foot, the atomized spray is being actively drawn through the containment area and the application and drying process is enhanced. At rates above 400 cubic feet per minute per square foot, the atomized spray is being accelerated and the exhaust flow plays a much more prominent role in the application process. The flow rate of the air through the containment area is therefore a major parameter which can be varied to modify the characteristics of the coating of the artificial tanning composition to the skin. The drying time for the composition deposited on skin is also ~~effected~~ affected by flow rate, with drying time decreasing as flow rates increase. At rates above 100 cubic feet per minute per square foot, the drying time (to the point of no transfer to other surfaces upon contact) is less than 5 minutes.